Amendment to the Claims:

1.   (Currently Amended) A method for visualizing a sequence of volume images of a moving object, which method comprises the steps of:

a) determining relevant first volume values of a first volume image, which are relevant to visualization of the first volume image, from first volume values of said first volume image;

b) storing first voxels with which the relevant first volume values are associated;

c) deriving a first two-dimensional image from the stored first voxels of the first volume image;

d) determining relevant second volume values of a second volume image, which are relevant to visualization of the second volume image, from second volume values which are associated with the stored first voxels or with voxels neighboring said stored first voxels;

e) storing second voxels with which the relevant second volume values are associated; [[and]]

f) deriving a second two-dimensional image from the stored second voxels of the second volume image; and

g) at least one of displaying and storing at least one of the first and second two-dimensional images.

2.   (Previously Presented)   The method as claimed in claim 1, in which the neighboring voxels are defined by a motion model of the moving object .

3.   (Previously Presented)   The method as claimed in claim 1, in which all voxels from regions surrounding the stored first voxels are defined as neighboring voxels.

4.   (Previously Presented)   The method as claimed in claim 3, in which at least one of a shape and a magnitude of the surrounding regions is adjustable.

5.   (Previously Presented)   The method as claimed in claim 3, in which a surrounding region comprises all voxels positioned no further than a given geometrical distance from a stored first voxel.

6.   (Previously Presented)   The method as claimed in claim 1, in which the first voxels of the first volume image are combined in blocks for storage, each block being stored when a first volume value associated with at least one first voxel in the block is relevant for the visualization of the first volume image, the visualization of the second volume image being derived from the second volume values which are associated with the first voxels in the stored blocks or in blocks neighboring the stored blocks.

7.   (Cancelled)

8.   (Previously Presented)   The apparatus as claimed in claim 14, further comprising:
    an acquisition unit for acquiring the first and second volume images.

9.   (Previously Presented)   The apparatus as claimed in claim 8, wherein the apparatus is an ultrasound apparatus, and the acquisition unit comprises a sonography applicator.

10.   (Previously Presented)   The apparatus as claimed in claim 8, wherein the apparatus is a CT apparatus, and the acquisition unit comprises an X-ray source and an X-ray detector.

11.   (Previously Presented)   A computer readable medium having stored thereon a program executable by a computer for visualizing a sequence of volume images of a moving object, the computer readable medium comprising:
    a first determining code segment for determining relevant first volume values of a first volume image, which are relevant to visualization of the first volume image, from first volume values of the first volume image;

a first deriving code segment for deriving a first two-dimensional image from first voxels corresponding to the relevant first volume values of the first volume image;

a second determining code segment for determining relevant second volume values of a second volume image, which are relevant to visualization of the second volume image, from second volume values which are associated with the first voxels or with voxels neighboring said first voxels; and

a second deriving code segment for deriving a second two-dimensional image from second voxels corresponding to the relevant second volume values of the second volume image.

12. (Previously Presented) The method as claimed in claim 1, further comprising the step of:

repeating the steps d) to f) to derive further two-dimensional images from subsequent volume images.

13. (Previously Presented) The method as claimed in claim 1, wherein determining the relevant first volume values of the first volume image, which are relevant for the visualization of the first volume image, is based on an imaging direction.

14. (Previously Presented) An apparatus for visualizing a sequence of volume images, the apparatus comprising:

a data input for inputting volume images of a moving object;

a memory for storing voxels associated with volume values of the volume images; and

an image processor for determining first volume values of a first volume image which are relevant to visualization of the first volume image, causing first voxels with which the relevant first volume values are associated to be stored in the memory, deriving a first two-dimensional image from the stored first voxels of the first volume image, determining second volume values of a second volume image which are relevant to visualization of the second volume image from volume values associated with stored first voxels or with voxels neighboring the stored first voxels, causing second voxels with which the relevant second volume values are associated to

be stored in the memory, and deriving a second two-dimensional image from the stored second voxels of the second volume image.

15. (Previously Presented)   The apparatus of claim 14, further comprising:

a monitor for consecutively displaying the first two-dimensional image and the second two-dimensional image.